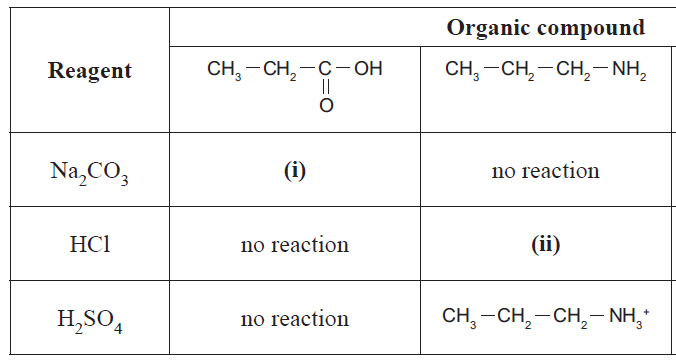
**Acid Base reactions**

**1)** Sodium carbonate, hydrochloric acid, and sulfuric acid are each added to separate samples of two

organic compounds.

The structures of the compounds and the products of any reactions are given in the table below.



Compare and contrast the reactions that **do** occur between these organic compounds, and the reagents in

the table above.

In your answer you should:

• give the structure of the organic products **(i)** and **(ii)**

• describe the different types of reactions occurring, and give reasons why they are classified as that type

• identify any specific conditions that are required for the reactions to occur.

**2)** When butanoic acid reacts with sodium hydrogen carbonate, NaHCO3, fizzing can be seen during the

reaction.

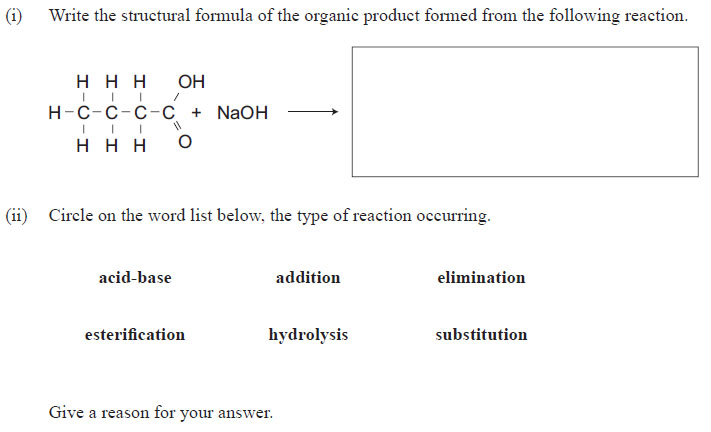
**i)** What type of reaction is occurring?

**ii)** Explain why fizzing is observed during the reaction.

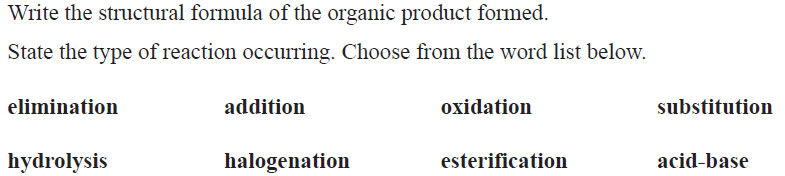
**iii)** Complete the equation below to show the structural formula of the organic product formed.



**3)**

****

**4)**

****

****

**5) Give the structural formula of the product formed when** ethanoic acid, CH3COOH, reacts with sodium carbonate solution.

**6) Draw and name the product and type of reaction when** propanoic acid is reacted with sodium hydroxide solution

© 2015 <http://www.chemicalminds.wikispaces.com>

NCEA questions and answers reproduced with permission from NZQA